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SURVEY OF FTP MAIL AND MLFL

Two surveys of Arpanet Server hosts were run between September 20, 1978 and December 11, 1978. The intent was to determine the response of the host's Server FTP program to:

(a) An attempt to mail to an unknown recipient at that host. The purpose of this survey was two-fold. First, to determine whether the host accepts mail for unknown recipients at all, and second, what response the host gives if it does not accept such mail.

(b) An attempt to mail to a known recipient using the MLFL command rather than the usual MAIL command. This survey was undertaken to determine the extent of support for the MLFL command among Server hosts, and the sort of reply received if the Server does not support MLFL. MLFL is potentially a 'better' form of communication than mail as the message is sent over a data connection rather than the command connection. Using the data connection eliminates the 'end-of-mail' marker and 'command reader' problems sometimes encountered over the command connection.

The ground rules of the survey were that all sites listed as Servers in the MIT/SAIL Host table were surveyed. In many cases, a host listed as a Server would not respond to an ICP at any time during the period of the survey. Once a host responded with what seemed to me to be a 'definitive' answer, I marked it as such and stopped surveying it.

MLFL Survey

The algorithm used was to ICP to socket 3 of the server (the standard old-FTP socket). Once a 300 response was received, I sent the MLFL command. Where I had the name of a real mailbox at a site (a Header-person, for example) I used that, otherwise the name "**". If a site asked for a password (response 504) after the MLFL command I gave "USER NETML" "PASS NETML" and retried the MLFL. If the server replied with a 255 SOCK command, I listened for the data-connection to be established. When it was, I transferred the mail file. Interestingly enough, most sites implement an RFC queueing algorithm that will allow the user site to attempt to establish the data-connection from its end.

Complete FTP scripts may be found, if you are interested, on MIT-DM, file NETDOC;MLFL SURVEY.

Sites are grouped by the general result they gave.

-site-	-last ftp reply if lost-	-when-
1) Sites that lost for various reasons:		
BNL	530 NOT LOGGED IN.	after MLFL
HARV-10	431 INVALID ENTRY - Try again	after USER
LLL-MFE	454 Login please	after SOCK
LONDON	000 INDRA FTP Version 2.00 ...	after ICP
NBS-10	454 Login please	after SOCK
WHARTON	454 DATA Connection error ...	after SOCK
WPAFB-AFAL	454 Login please	after SOCK

Note: "when" describes the last action performed by the surveyer before the indicated anomalous response.

after ICP -- surveyer had done ICP to socket 3
after MLFL -- surveyer had sent MLFL command
after USER -- surveyer had sent USER NETML in response to "504 Login please"
after SOCK -- surveyer had attempted to connect to specified data socket

2) Sites that don't support MLFL and say so:

AFWL	501 ML<?>FL **
CCA-SPEECH	501 ML<?>FL **
EGLIN	501 ML<?>FL **
LBL	506 Command not implemented.
LONDON-VDH	500 Command unrecognized
UCLA-CCN	500 COMMAND UNRECOGNIZED
WPAFB	501 ML<?>FL **

3) Sites that support MLFL (or at least go through all the right motions):

AMES-67	MIT-AI	SRI-KL
BBN-TENEX	MIT-DMS	SU-AI
BBN-TENEXA	MIT-MC	SUMEX-AIM
BBN-TENEXD	MIT-ML	UCLA-ATS
BBN-TENEXE	MIT-XX	UCLA-SECURITY
BBN-UNIX	NBS-UNIX	USC-ECL
CCA-TENEX	OFFICE-1	USC-ISI
CMU-10A	PARC-MAXC	USC-ISIB
CMU-10B	PARC-MAXC2	USC-ISIC

DEC-MARLBORO	RADC-TOPS20	USC-ISIE
I4-TENEX	RAND-RCC	UTEXAS
ILL-UNIX	RAND-UNIX	
LL	RUTGERS	
LL-ASG	SRI-KA	

4) Sites that support MLFL but require "USER NETML" "PASS NETML" (Multics):

MIT-MULTICS
RADC-MULTICS

5) Others:

a) Sites that might support it if I could mail to a real user (some of these run operating systems that are "known to work", e.g. TENEX):

BBN-TENEXB	450 No such mailbox at this site.
CCA-SDMS	450 User Unknown
CCTC	451 User Not Recognized
CMU-10D	507 USER NOT FOUND: **
DTI	451 User Not Recognized
LL-11	450 User Unknown
LL-XN	450 User Unknown
NCSC	451 User Not Recognized
NOSC-CC	451 User Not Recognized
NOSC-SDL	451 User Not Recognized
NTIA-ITS	451 User Not Recognized
OFFICE-2	450 No such mailbox at this site.
RADC-XPER	451 User Not Recognized
SDAC-44	431 User name invalid
SDAC-UNIX	451 User Not Recognized
SRI-UNIX	451 User Not Recognized

b) Sites that either never responded to an ICP to socket 3, or were not accepting FTP users:

ANL	I4B-TENEX	NOSC-SECURE1
ARPA-DMS	ISI-SPEECH11	NSWC-WO
CMU-CMMP	LBL-UNIX	NUSC
CTO-DDS	LLL-COMP	NUSC-NPT
DTNSRDC	MOFFET-ARC	NWC
FNWC	NADC	NYU
GUNTER-UNIX	NDRE	PENT-UNIX

MAIL Survey

The mechanics of the MAIL survey were similar to those of the MLFL survey. The command was "MAIL Fzorkness" (an account unlikely to exist on any host). The responses are grouped into a few general categories.

Complete FTP results may be found on MIT-DM, file NETDOC;MAIL SURVEY.

-site-	-last response-
1) Sites that lost completely.	
LONDON	000 INDRA FTP Version <>.00 ...

2) Sites that accept mail to an unknown recipient.

BNL	MIT-ML	USC-ISI
MIT-AI	RAND-RCC	USC-ISIB
MIT-DMS	UCLA-CCN	USC-ISIC
MIT-MC	USC-ECL	USC-ISIE

3) Sites that refuse mail to an unknown recipient (grouped by response).

SDAC-44	431 User name invalid
BBN-TENEX	450 No such mailbox at this site.
BBN-TENEXA	450 No such mailbox at this site.
BBN-TENEXB	450 No such mailbox at this site.
BBN-TENEXD	450 No such mailbox at this site.
BBN-TENEXE	450 No such mailbox at this site.
BBN-UNIX	450 User Unknown
CCA-SDMS	450 User Unknown
CCTC	451 User Unknown
EDN-UNIX	450 User Unknown
I4-TENEX	450 No such mailbox at this site.
ILL-UNIX	450 User unknown
LL	450 No such mailbox at LL
LL-ASG	450 User unknown
LL-XN	450 User unknown
MIT-MULTICS	450 Cannot locate mailbox for \Fzorkness\
MIT-XX	450 No such mailbox at this site.
NBS-UNIX	450 User Unknown
NCSC	450 User Unknown
NOSC-CC	450 User Unknown
NOSC-SDL	450 User Unknown
NTIA-ITS	450 User Unknown
OFFICE-1	450 No such mailbox at this site.
OFFICE-2	450 No such mailbox at this site.
PARC-MAXC	450 No such mailbox at this site.

PARC-MAXC2	450 No such mailbox at this site.
RADC-XPER	450 User Unknown
RADC-MULTICS	450 Cannot locate mailbox for \Fzorkness\
RADC-TOPS20	450 No such mailbox at this site.
RAND-UNIX	450 User Unknown
RUTGERS	450 No such mailbox at this site.
SDAC-UNIX	450 User Unknown
SRI-KA	450 No such mailbox at this site.
SRI-KL	450 No such mailbox at this site.
SU-AI	450 I don't know anybody named Fzorkness
SUMEX-AIM	450 No such mailbox at this site.
UCLA-ATS	450 User Unknown
UCLA-SECURITY	450 User Unknown
UTEXAS	450 User Unknown
CCA-TENEX	451 No such mailbox at this site.
AFWL	501 MA<?>IL Fzorkness
CCA-SPEECH	501 MA<?>IL Fzorkness
EGLIN	501 MA<?>IL Fzorkness
WPAFB	501 MA<?>IL Fzorkness
AMES-67	503 COMMAND \MAIL FZORKNESS\ IGNORED: UNKNOWN USER
LBL	506 Command not implemented.
CMU-10A	507 % USER NOT FOUND: FZORKNESS
CMU-10B	507 % USER NOT FOUND: FZORKNESS
CMU-10D	507 % USER NOT FOUND: FZORKNESS
HARV-10	507 No such user as FZORKNESS
LLL-MFE	507 No such user as FZORKNESS
NBS-10	507 No such user as FZORKNESS
WHARTON	507 No such user as FZORKN
WPAFB-AFAL	507 No such user as FZORKNESS

4) Sites to which I was never able to connect, or which were not accepting users.

ANL	I4B-TENEX	NOSC-SECURE1
ARPA-DMS	ISI-SPEECH11	NSWC-WO
CMU-CMMP	LBL-UNIX	NUSC
CTO-DDS	LL-11	NUSC-NPT
DEC-MARLBORO	LLL-COMP	NWC
DTI	LONDON-VDH	NYU
DTNSRDC	MOFFETT-ARC	SRI-UNIX
FNWC	NADC	SU-ISL
GUNTER-UNIX	NDRE	